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1 \* \* \* C O N F I D E N T I A L \* \* \*

2 UNITED STATES DISTRICT COURT

3 SOUTHERN DISTRICT OF OHIO

4 WESTERN DIVISION (DAYTON)

5

6

PLAYTEX PRODUCTS, INC., )

7 )

Plaintiff, )

No. C-1-02-391

8 )

vs. )

9 )

THE PROCTER & GAMBLE )

Volume II

10 DISTRIBUTING COMPANY et al., )

)

11 Defendants. )

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14

August 8, 2003

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12:17 p.m.

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Continued deposition of EVAN HUTCHISON,  
held at the offices of Latham & Watkins, 885  
Third Avenue, New York, New York, before  
Laurie A. Collins, a Registered Professional  
Reporter and Notary Public of the State of  
New York.

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2 finite dimension. A segment can be infinitely  
3 short. So given those two assumptions, a tolerance  
4 zone applied to this -- there's a tolerance for  
5 diameter that I could apply to this that would  
6 certainly cause an interpretation.

7 There's all kinds of lines that could be  
8 drawn and segments that could be deduced from that.  
9 I don't have any idea why I would do that, and I  
10 didn't try to. But I suppose technically that's  
11 possible. There's a -- but it's only to be  
12 splitting hairs rather than to be anything that I  
13 think makes sense.

14 Q. I'm not trying to split hairs with you;  
15 I'm simply trying to find out if it is your view  
16 that a segment of a perfect circle could fall  
17 within the geometric manufacturing tolerance that  
18 you describe on page 2 of your report.

19 MR. STABINSKY: Objection, asked and  
20 answered.

21 A. I think the way to answer it clearly,  
22 given the objection, is that it would be totally  
23 inappropriate to take that tolerance and apply it  
24 to this geometry. I would not wish anyone to do  
25 that, because it's not how -- it's a

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2 A. I think it could be it was appropriate  
3 to apply it to that, to examine it for whatever  
4 purpose. It's possible. But it's, in my mind, not  
5 at all anything to do with what we're talking  
6 about, because this is included, this is assumed,  
7 to be a perfect circle. So I would in no way --  
8 there was a tolerance zone, but it shouldn't be  
9 that one, essentially. That one is not intended to  
10 do anything with a, quote, perfect cylinder.

11 It's a matter of the way you worded it  
12 that causes me to answer the way I have. I don't  
13 think it's appropriate. But if some person would  
14 do that, they could probably determine something  
15 from it.

16 MR. FARUKI: Off the record.

17 THE VIDEOGRAPHER: The time is 3:25  
18 p.m., and we're going off the record.  
19 (Recess taken from 3:25 to 3:52.)

20 THE VIDEOGRAPHER: The time is 3:52  
21 p.m., and we are back on the record.

22 Q. A few remaining questions. This will  
23 jump around a little bit, if you don't mind. But  
24 let me start here: You are not saying,  
25 Mr. Hutchison, that you know that the 7.096

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2 misrepresentation of why it was determined.

3 But the literal answer is I could draw  
4 two lines and see that there was a segment. It  
5 would mean nothing. So I would rather not say that  
6 it's -- it is possible to draw two lines, but it  
7 wouldn't be appropriate to do that at all or  
8 related to this case at all. But when anything is  
9 asked to me as possible, I could certainly draw two  
10 lines on it and find that, but it wouldn't mean a  
11 damn thing.

12 Q. Does this geometry mean Exhibit 68?

13 A. Yes, this round profile, a round  
14 profile.

15 Q. Maybe I'm asking my question in a wrong  
16 way. Let me ask it without any reference to  
17 Exhibit 68.

18 A. Okay.

19 Q. With reference to the tolerance zone  
20 that you articulate and describe on page 2 of your  
21 supplemental report, could that tolerance zone  
22 encompass a segment of a cylinder that is perfectly  
23 round?

24 MR. STABINSKY: Objection, calls for  
25 speculation.

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2 millimeter segment that you identify on page 2 of  
3 your report gives the Pearl better gripability, are  
4 you?

5 A. I'm not -- I think your question was I'm  
6 not saying that it doesn't? Is that the way you've  
7 phrased it?

8 Q. Let me say it again. You are not saying  
9 that you know that this 7.096 millimeter segment  
10 that you identify on page 2 gives the Pearl better  
11 gripability?

12 MR. STABINSKY: Objection, vague.

13 Better gripability as to what?

14 A. I don't -- I don't know exactly how to  
15 answer that. I think that the section has -- it's  
16 a zone that I've calculated in an area that I  
17 believe gives better gripability for the user when  
18 they're inserting the tampon and handling it.

19 Q. You say it's a zone that you've  
20 calculated in an area that gives better  
21 gripability. So let me ask it this way: Are you  
22 offering any opinion as to whether the zone that  
23 you're describing on page 2 of your report improves  
24 the gripability of the Pearl?

25 A. I believe that if it were absent it

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<p style="text-align: right;">289</p> <p>1 Hutchison - Confidential</p> <p>2 this section has less.</p> <p>3 Q. "This section" being traveling from A to</p> <p>4 B?</p> <p>5 A. A to B. A to B having less around the</p> <p>6 12 o'clock position and 6 o'clock position has,</p> <p>7 quote, more. And so I guess "curved," like a lot</p> <p>8 of other words, is a relative term.</p> <p>9 I didn't -- since, again, my focus in</p> <p>10 this case was exactly on flat within the</p> <p>11 manufacturing tolerance, because that was what I</p> <p>12 was instructed to interpret, I can conclude that</p> <p>13 that is -- that's my interpretation of flat within</p> <p>14 manufacturing tolerance.</p> <p>15 Q. On Exhibit 133 the portion of this line</p> <p>16 traveling from Point A to Point B is itself a</p> <p>17 portion of the surface that appears curved to you?</p> <p>18 MR. STABINSKY: Objection, asked and</p> <p>19 answered.</p> <p>20 A. Yeah, the entire -- the entire device</p> <p>21 is a -- has the characteristic in parts of it that</p> <p>22 is curvature. It is not a square box.</p> <p>23 Q. My question was the segment on Exhibit</p> <p>24 133 that is the line traveling from A to B. Does</p> <p>25 that segment describe a curved surface or show a</p>	<p style="text-align: right;">291</p> <p>1 Hutchison - Confidential</p> <p>2 the thickness of the piece. So if I have, for</p> <p>3 example, a thin -- a part which has a thin section</p> <p>4 adjoining a thick section and I immediately abutted</p> <p>5 those two sections and I attempted to maintain a</p> <p>6 thickness -- or a flatness dimension entirely over</p> <p>7 that surface, I would find what's characterized in</p> <p>8 the industry as a sink mark anyplace there was a</p> <p>9 thick section because it would shrink more than the</p> <p>10 corresponding surrounding area.</p> <p>11 So, for instance as well, that thicker</p> <p>12 versus thinner section might be a rib in a flat</p> <p>13 plate to keep it from bending. And if it's wide</p> <p>14 enough and deep enough, you actually see an imprint</p> <p>15 of it on the opposite side of the part, which could</p> <p>16 be a surface that you're intending to keep flat and</p> <p>17 have no blemishes.</p> <p>18 So the best thing to do, if you're</p> <p>19 intending to maintain a flatness profile, is to</p> <p>20 have all of the wall thicknesses uniform in the</p> <p>21 area that you would like to contain a flatness</p> <p>22 relatively close to the same thickness. Huge</p> <p>23 differences cause bigger sink marks; small</p> <p>24 differences create smaller ones. That's just a</p> <p>25 guidance that is commonly understood.</p>
<p style="text-align: right;">290</p> <p>1 Hutchison - Confidential</p> <p>2 curved surface?</p> <p>3 MR. STABINSKY: Same objection.</p> <p>4 You can answer it again.</p> <p>5 A. I think it shows a surface that has</p> <p>6 curvature, yeah.</p> <p>7 Q. The next questions I had were regarding</p> <p>8 Exhibit A to your report, Exhibit 67A. The</p> <p>9 flatness tolerance you use has under the word</p> <p>10 "flatness" a parenthetical "see note No. 4."</p> <p>11 A. Correct.</p> <p>12 Q. I did not ask you about that before.</p> <p>13 Note No. 4 and the reference note next to it says,</p> <p>14 Part design should maintain a wall thickness as</p> <p>15 nearly constant as possible. Complete uniformity</p> <p>16 in this dimension is sometimes impossible to</p> <p>17 achieve. Walls of nonuniform thickness should be</p> <p>18 gradually blended from thick to thin.</p> <p>19 Do you know why it's stated that part</p> <p>20 design should maintain a wall thickness as nearly</p> <p>21 constant as possible?</p> <p>22 A. Yes, I do.</p> <p>23 Q. Tell us why.</p> <p>24 A. The way that plastic when molded is --</p> <p>25 behaves dimensionally upon cooling is depending on</p>	<p style="text-align: right;">292</p> <p>1 Hutchison - Confidential</p> <p>2 Q. Is there a name for that phenomenon that</p> <p>3 you're talking about?</p> <p>4 A. Yeah, shrinkage. This is really an</p> <p>5 artifact of shrinkage in materials.</p> <p>6 Q. Is it also called warpage?</p> <p>7 A. Not necessarily. Warpage is, in my</p> <p>8 definition, different.</p> <p>9 Q. What is warpage?</p> <p>10 A. Warpage is when a part has a tendency to</p> <p>11 actually bow or I think a more common terminology</p> <p>12 for it is to potato chip, where you have actually</p> <p>13 sliced from the potato, for instance, generally</p> <p>14 something that is flat when you started and, upon</p> <p>15 shrinking -- I imagine in your life you have never</p> <p>16 seen a perfectly flat potato chip. They generally</p> <p>17 warp and bow, and that's from shrinkage.</p> <p>18 So strictly speaking a plastic part when</p> <p>19 molded -- if you tried to just mold a playing card,</p> <p>20 for instance, from plastic, it would be incredibly</p> <p>21 difficult to injection mold a playing card and have</p> <p>22 it come out looking anything like a playing card.</p> <p>23 They would be kind of unusable playing cards. They</p> <p>24 would be dang hard to shuffle, anyway.</p> <p>25 So you basically have warpage, meaning a</p>

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 2 surface that's not holding flat because it's shrunk  
 3 and changed in flatness because of a dimensional  
 4 shrinking this way (indicating) and imperfections  
 5 in the flow.  
 6 And in the case of a shrinkage via a  
 7 sink mark, that would be driven specifically by a  
 8 thick section/thin section difference, and it's  
 9 driven by the fact that all plastic shrinks from  
 10 the time it's injected to the time it's cooled  
 11 strictly because of the thermodynamic rule of  
 12 expansion and contraction. When it's colder, it's  
 13 smaller. And it will get smaller the more there is  
 14 of it.  
 15 It's basically that, if I did well.  
 16 Q. If I can say this more simply, a  
 17 material, when it's warm, would tend to expand; and  
 18 when it's cool, would tend to shrink?  
 19 A. Always does, yes.  
 20 Q. In the terms of Footnote 4 in these  
 21 reference notes on your SPI standard, is that  
 22 addressing shrinkage, as you've described it, or is  
 23 that addressing warpage, as you've described it, or  
 24 both?  
 25 A. It has some impact on both. The first I

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 2 for a part to finally stabilize dimensionally and  
 3 maintain something near its final dimension. So it  
 4 happens in all dimensions.  
 5 And so you, as a part designer, always  
 6 consider not what the metal says the size of the  
 7 piece is but what the material, when molded in that  
 8 metal at a certain temperature, will result when it  
 9 finally cools.  
 10 So shrinkage happens to be a dimension  
 11 like this (indicating) and warp -- and talks about,  
 12 for instance, with regard to flatness, a surface  
 13 that has a sink in it which affects, then,  
 14 flatness. But warpage, in fact, is shrinkage  
 15 caused by things coming, frankly, this way  
 16 (indicating) on your playing card so that maybe you  
 17 have more dimensional pull on the length of card  
 18 rather than the width.  
 19 In that case it would curl one way. If  
 20 you had it the other way, it would curl the other  
 21 way. It could be in a corner. That's why potato  
 22 chips aren't even uniform. They're all potatoes,  
 23 but they perform differently when they shrink.  
 24 That's really the same thing.  
 25 Warpage connotes to me something you

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 2 think of is -- shrinkage is warpage. Shrinkage  
 3 causes warpage as well. Shrinkage is in all  
 4 dimensions. Any material shrinks  
 5 three-dimensionally. It's like air or any other  
 6 material. When it's warmer, it expands uniformly  
 7 in all dimensions and less constrained.  
 8 So when I mold something or do anything  
 9 with something that is warm, except for water,  
 10 because it behaves a little funny around its  
 11 freezing point and melting point. There are  
 12 exceptions.  
 13 Take plastic. It's really like this for  
 14 all injectable thermoplastics. They expand and  
 15 they take up more volume when they're warm, and  
 16 they're very hot when they're injected. They're  
 17 sometimes 300 degrees or 400 degrees Fahrenheit.  
 18 So they are very hot to make them blow.  
 19 And then when they're cooled to room  
 20 temperature or even chilled further by putting in a  
 21 refrigerator, they get very much smaller than that.  
 22 That process right after molding from hot as  
 23 enabling it to flow and fill the mold to being at  
 24 room temperature and finished is a process that --  
 25 cooling and shrinking in fact takes several days

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 2 intended to have flat like a piece of paper.  
 3 Sinkage -- and that affects a flatness tolerance  
 4 because that's not flat anymore; it's like this.  
 5 Q. Do you know why the flatness tolerance  
 6 in this SPI standard directs the reader to Footnote  
 7 4?  
 8 A. Yes.  
 9 Q. Why?  
 10 A. Because it's a watchout that if you're  
 11 attempting to control flatness you should attempt  
 12 to control wall thickness, because it has an impact  
 13 on flatness and it has all kinds of impacts.  
 14 That's a generally known footnote. That's not like  
 15 a Nahoff [phonetic] or anyone who's done plastic  
 16 part molding. It's very commonly understood.  
 17 Q. So the flatness tolerance here in the  
 18 SPI standard is supposed to address the issue of  
 19 wall thickness and maintaining wall thickness as  
 20 nearly constant as possible?  
 21 A. No. It's, I think, a callout that warns  
 22 you -- warns the naive person that were they to  
 23 attempt flatness they should consider wall  
 24 thickness as well. That's all it connotes to me.  
 25 Again, it's almost a footnote that to a person

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<p style="text-align: right;">297</p> <p>Hutchison - Confidential</p> <p>that's operated as a molding design -- part design person or mold design person, it's, frankly speaking, well-known; and I think called out for completeness in their regard because it could have novice reading this just learning to do part design for the first time.</p> <p>Q. Is the part deviation that a flatness tolerance is intended to address a deviation of shrinkage or warpage in a plastic part?</p> <p>A. It includes every possible and conceivable effect. So shrinkage and warpage are in there, and on and on and on, and nicks and scratches and anything that could happen.</p> <p>Q. So any effect of the manufacturing process, if you will, is what the flatness tolerance is designed?</p> <p>A. As well as how -- well, I suppose if you call the process, how well the tool was actually manufactured. It could be wrong with regard to the drawing, and for instance then you would use a tolerance to determine whether the guy made the tool correctly.</p> <p>Q. Let me give you an easier question, maybe. Describe for us what the flatness tolerance</p>	<p style="text-align: right;">299</p> <p>Hutchison - Confidential</p> <p>say that's true, yeah. So that's -- I want to qualify that as among people who deal with this issue. If you describe something as having warpage, that would sometime -- that would be the cause of it, or not. It could be something else.</p> <p>Q. Is it directly related to material shrinkage?</p> <p>A. In many cases it is, that's right.</p> <p>Q. Then shrinkage is directly proportional to wall thickness; is that right?</p> <p>A. It's -- shrinkage is directly proportional to volume, really, volume and it's also -- it's very different from material to material. So I suppose if -- wall thickness as a thicker piece versus a thinner piece, you mean? A thicker piece will shrink more than a thinner piece? Is that the way I should interpret the question?</p> <p>Q. The idea I'm trying to get at is that varying wall thickness is the single largest cause of warpage.</p> <p>A. No, I wouldn't necessarily agree with that, single largest cause. It is one of the causes. There can be many others, in my opinion.</p>
<p style="text-align: right;">298</p> <p>Hutchison - Confidential</p> <p>is designed to address or accommodate.</p> <p>A. Okay. It's designed to accommodate or address the surface as it results from any possible cause, as designed, as a tool that was made to produce it, as abused or not in manufacturing, as dropped, dented or poorly injected. It could be part of the process. It could be a part of the design. It could be part of the material selection. It's really a totally open-ended thing as to cause. It's only about result. It's a measurement of the result in an area of the part. That's all really -- flatness is fairly black and white in that regard.</p> <p>Q. Would you agree with the definition of warpage as dimensional distortion in a plastic part or object after molding?</p> <p>A. That is one definition of -- I mean, warpage can be that, right. It's not the only defamation effect, for instance, but it is a defamation -- one of the defamation effects.</p> <p>Q. Is the definition of warpage as dimensional distortion of a plastic object after molding a generally accepted definition of warpage?</p> <p>A. To someone skilled in the art, I would</p>	<p style="text-align: right;">300</p> <p>Hutchison - Confidential</p> <p>There can be other things going on in the tool or in the molding the part.</p> <p>Q. Do you agree with the statement that as shrinkage is directly proportional to wall thickness, wall thickness is directly related to warpage?</p> <p>MR. STABINSKY: I'm going to object to that as vague.</p> <p>A. I'm not sure. It's a little tenuous.</p> <p>MR. STABINSKY: If there's something you're reading from, Charlie, you may as well show him the document.</p> <p>MR. FARUKI: Why don't you read my question back.</p> <p>(Record read.)</p> <p>A. No, not in all cases.</p> <p>Q. Is it important to design a part so as to make wall thickness as nearly uniform as possible?</p> <p>A. It is if you're attempting to accomplish certain things. Sometimes you have wall thickness that are incredibly different because the intent of the part was to have a feature that needed to have a thick section and a thin section. So it's</p>

35 (Pages 297 to 300)